Influences of Geoduck Aquaculture on Eelgrass

Kirsten Rowell, Jackie White, Jennifer Ruesink*
Universtiy of Washington

Keywords: geoduck, eelgrass, aquaculture, Puget Sound

Eelgrass (*Zostera marina*) is recognized as an important habitat for intertidal species, and it is protected federally and in Washington State where it is currently declining. In Puget Sound, *Z. marina* is particularly sparse and patchy in the southern portion where geoduck (Panopea abrupta) aquaculture currently occurs. We ask the question, how does *Z. marina* respond to P. abrupta aquaculture? We monitored *Z. marina* shoot densities and growth at three P. abrupta aquaculture sites in South Puget Sound. Additionally, we conducted a manipulative experiment where we tested how disturbance, nutrients and presence of P. abrupta affect *Z. marina* productivity. Our preliminary monitoring data indicate that shoot density increases in the late summer, with highest growth rates and biomass during the late summer. Experimentally we document that *Z. marina* densities increased in treatments without P. abrupta, illustrating a disturbance effect on *Z. marina*. Longer-term impacts on growth, recovery and changes in sediment and porewater nutrients will be recorded over the next few years.